

N° 7330



A.D. 1895

*Date of Application, 10th Apr., 1895*

*Complete Specification Left, 9th Jan., 1896—Accepted, 15th Feb., 1896*

### PROVISIONAL SPECIFICATION.

#### An Appliance for Preventing Sounds from Entering the Ear.

I, MABEL MARY VAUGHAN of 5<sup>F</sup> Oxford and Cambridge Mansions, Marylebone Road, in the County of London do hereby declare the nature of this invention to be as follows:—

5 My invention is for an apparatus to prevent noises and sounds unpleasant or disturbing to the individuals sensorium reaching the tympanum by conduction through the external auditory canal, and is particularly adapted for the use of invalids, students &c.

10 The apparatus may consist of a suitable shaped spring, or compound skeleton fan spring, which can be padded or rendered adaptable by other suitable means, to either the vertical, parietal or occipital region (or all such regions) of the human head. The adjustment may be made by means of slots and binding screws in the springs, or by means of adjusting screws working through projections in said springs, or by clamps, toggles, buckles, pins or other suitable means. Such adjustments are preferably provided to the centre of all springs, as well as to the spring  
15 carrying the deafening pad. In the compound form of the apparatus the various springs, preferably three, would be arranged with one bolt to hold all the ends on one side of the head. All such ends may be slotted if desired, and the centres of all the springs may be attached to a suitable distance piece, or pieces, so as to maintain the said springs in their respective positions longitudinally, and such  
20 distance pieces may also be capable of adjustment. The bolt holding the ends of the said springs may pass through a separate adjustable spring piece so guided and formed as to give an inward pressure, and be provided with a suitably padded, inflated, or other flexible button, pad or plug, to press upon and effectually close the external auditory canal, either by the pressure being exerted upon the tragus,  
25 or by closing the meatus. The said pad may be mounted on a ball and socket, or plain hinge joint or their equivalents, or it may be fixed to the spring. The adjustments may also be by means of coiled, or other suitable, springs attached between the component parts of the frame springs, and the ends of the frame springs may be suitably guided in, on or through one another to give sufficient  
30 rigidity. Where one spring only is used as the frame, there may be attached thereto longitudinal pieces, back and front, to maintain the spring in its vertical position. The springs may be made of metal, wood, vulcanite, whalebone, celluloid or other suitable substance.

Dated this Tenth day of April 1895.

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G. T. HARRAP,  
Agent for Applicant.



## COMPLETE SPECIFICATION.

## An Appliance for Preventing Sounds from Entering the Ear.

I, MABEL MARY VAUGHAN of 5<sup>F</sup> Oxford and Cambridge Mansions, Marylebone Road, in the County of London do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

My invention is for an apparatus to prevent noises and sounds unpleasant or 5  
disturbing to the individuals sensorium reaching the tympanium by conduction through the external auditory canal, and is particularly adapted for the use of invalids, students *etc.*

That my invention may be more readily understood I have attached hereto a sheet of drawings showing different forms of the apparatus, in which similar letters 10  
refer to similar parts.

The apparatus may consist of a suitably shaped spring as A in Figs. 1, 2, 3 & 4, or compound skeleton fan spring as A A A in Fig. 5, which can be padded or rendered adaptable by other suitable means, to either the vertical, parietal or occipital region, (or all such regions) of the human head. The adjustment may 15  
be made by means of slots and binding screws in the spring A, as at B in Figs. 4, 5, 6, & 7; or by means of adjusting screws working through projections on said springs, as at C in Figs. 1, 2, 3 & 5, or by clamps, toggles, buckles, pins or other suitable means.

Such adjustments are preferably provided to the centre of all the springs, as 20  
well as to the spring carrying the deafening pad D. In the compound form of the apparatus the various springs A. (Fig. 5) preferably three, would be arranged with one bolt to hold all the ends on one side of the head, as shown. All such ends may be slotted if desired, and the centres of all the springs may be attached to a suitable distance piece E, or pieces, so as to maintain the said springs in their 25  
respective positions longitudinally, and such distance pieces may also be capable of adjustment. The bolt holding the said springs may pass through a separate adjustable spring piece F (Figs. 6 & 7) so guided and formed as to give an inward pressure, and be provided with a suitable padded, inflated, or other flexible button, pad or plug, D, to press upon and effectually close the external auditory canal, 30  
either by the pressure being exerted upon the tragus, or by closing the meatus, or covering the ear. The said pad may be mounted on a ball and socket or plain hinge joint, or their equivalents, or it may be fixed to the springs A or B. The pad for covering the ear is preferably made as shown in Figs. 8, 9, & 10, a suitable inflated flexible tube G being attached to a flexible piece or plate with a star shaped 35  
spring piece, H, which is fixed to the spring A by a screw or rivet, or joint at I. The tube G will bear on the side of the head and the cavity at H (Fig. 9) will be made large and deep enough to contain the external ear. With a pad of this form the spring A may simply lay on the head, back or breast, so long as it exerts sufficient pressure upon the pads. 40

The various adjustments may also be by means of coiled, or other suitable springs, attached between the component parts of the frame springs, and the ends of the frame springs may be suitably guided in, on or through one another to give sufficient rigidity, as shown.

Where one spring only is used as the frame A (Figs. 1 & 2.) there may be attached 45  
thereto a longitudinal piece (or pieces) E, back and front, to maintain the said spring A in its vertical position. The springs may be made of metal, wood, vulcanite whalebone, celluloid or other suitable substance.

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*Vaughan's Appliance for Preventing Sounds from Entering the Ear.*

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Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is,

1. In appliances for preventing sounds from entering the ear the single or com-  
5 pound spring frames A with or without adjustment and carrying pads D as herein described.
2. In appliances for preventing sounds entering the ear, the adjustable spring piece F as described with reference to Figs. 6 and 7.
3. In appliances for preventing sounds from entering the ear, the pad D consisting  
10 of a flexible inflated tubular piece G and plate or spring H, as described with reference to Figs. 8, 9, & 10.

Dated this 8th day January 1896.

G. T. HARRAP,  
Agent for Applicant.

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[This Drawing is a reproduction of the Original on a reduced scale.]

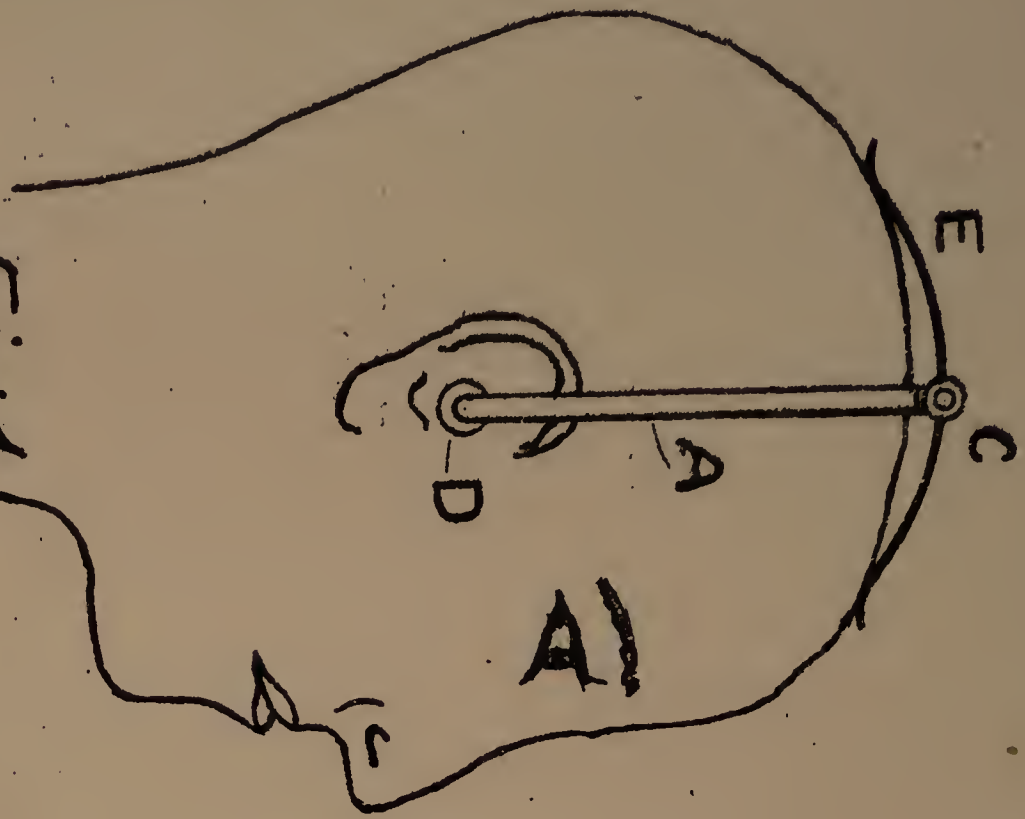


Fig. 1.

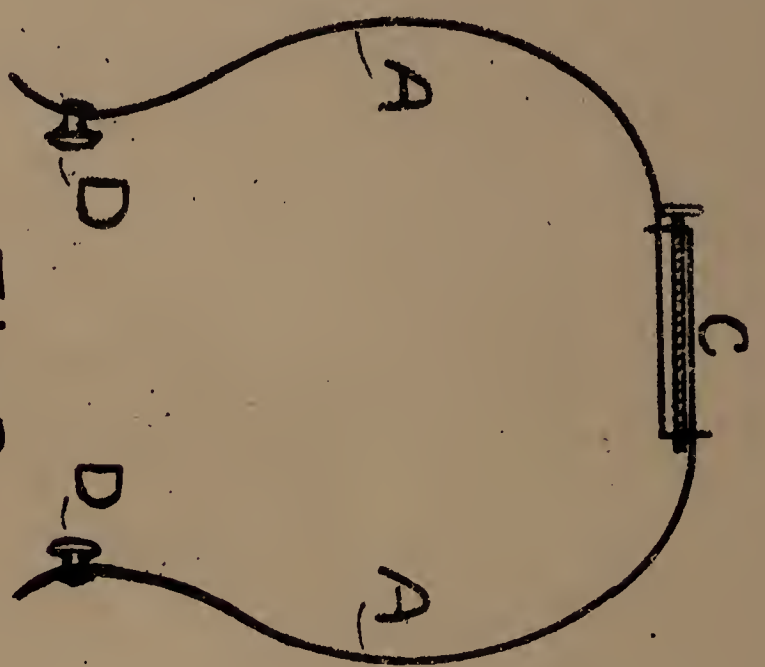


Fig. 3.



Fig. 4.

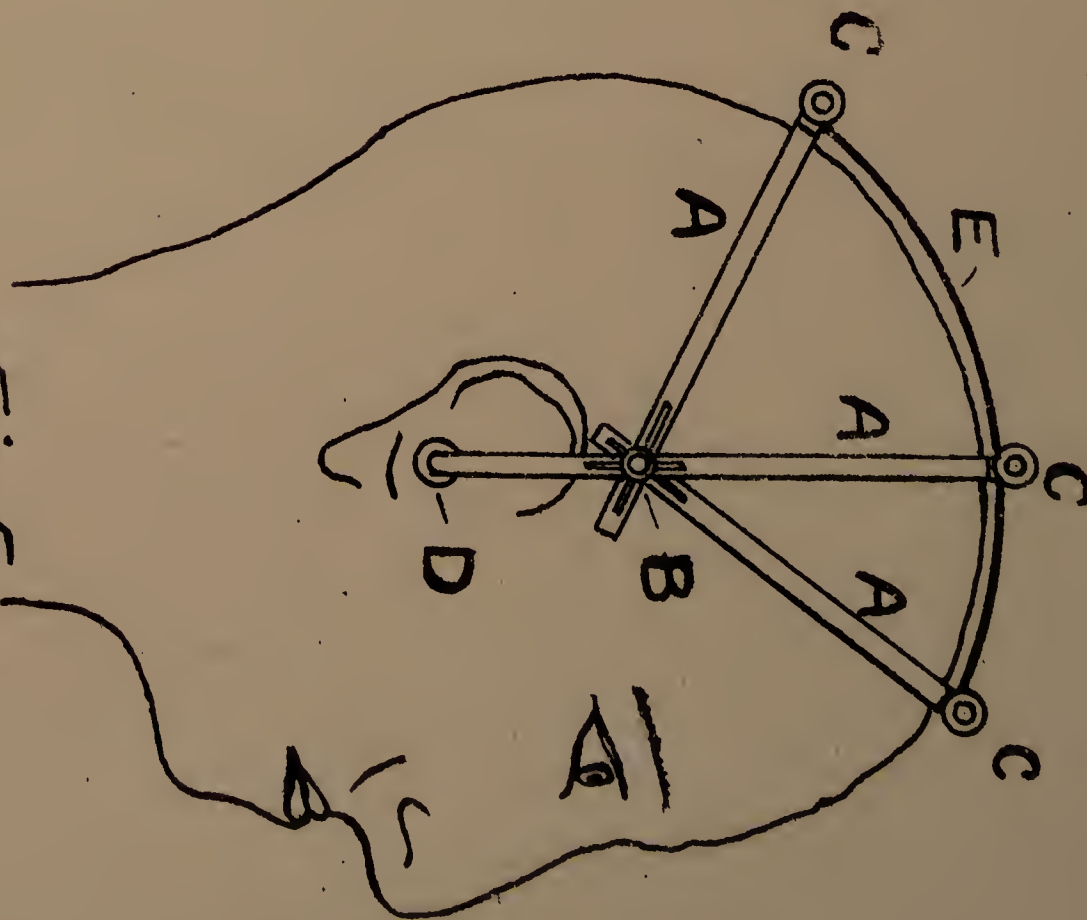


Fig. 5.

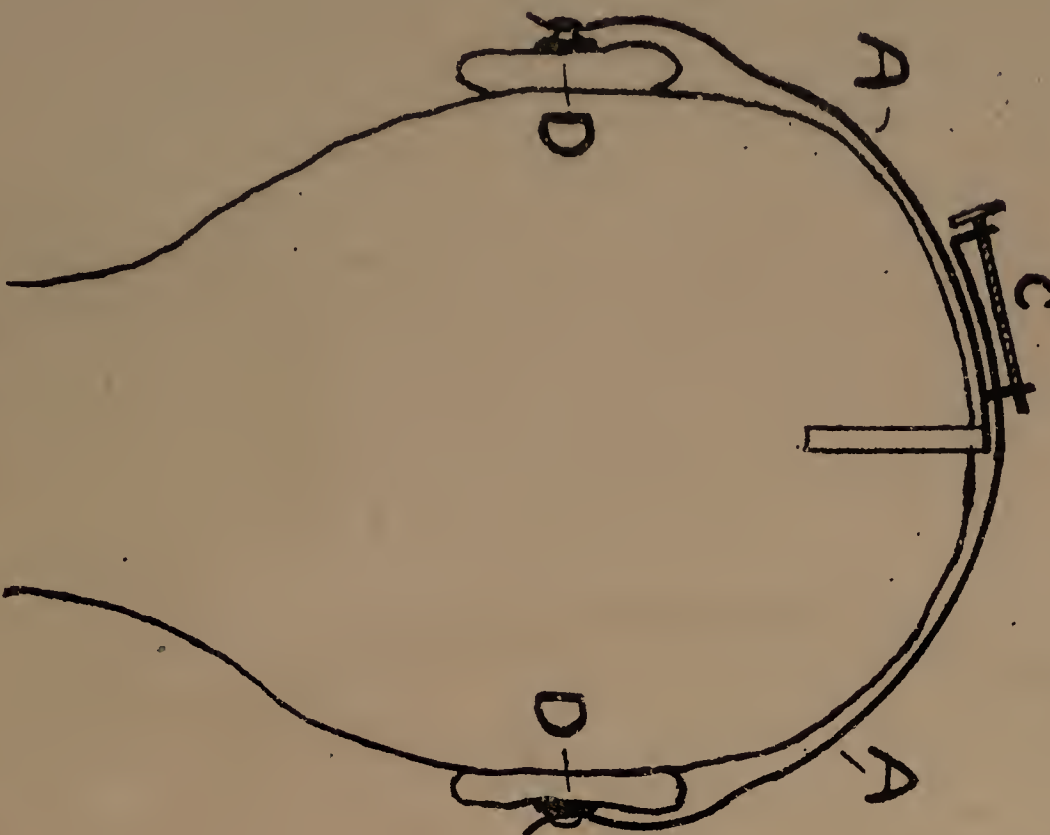


Fig. 2.



Fig. 6.



Fig. 7.

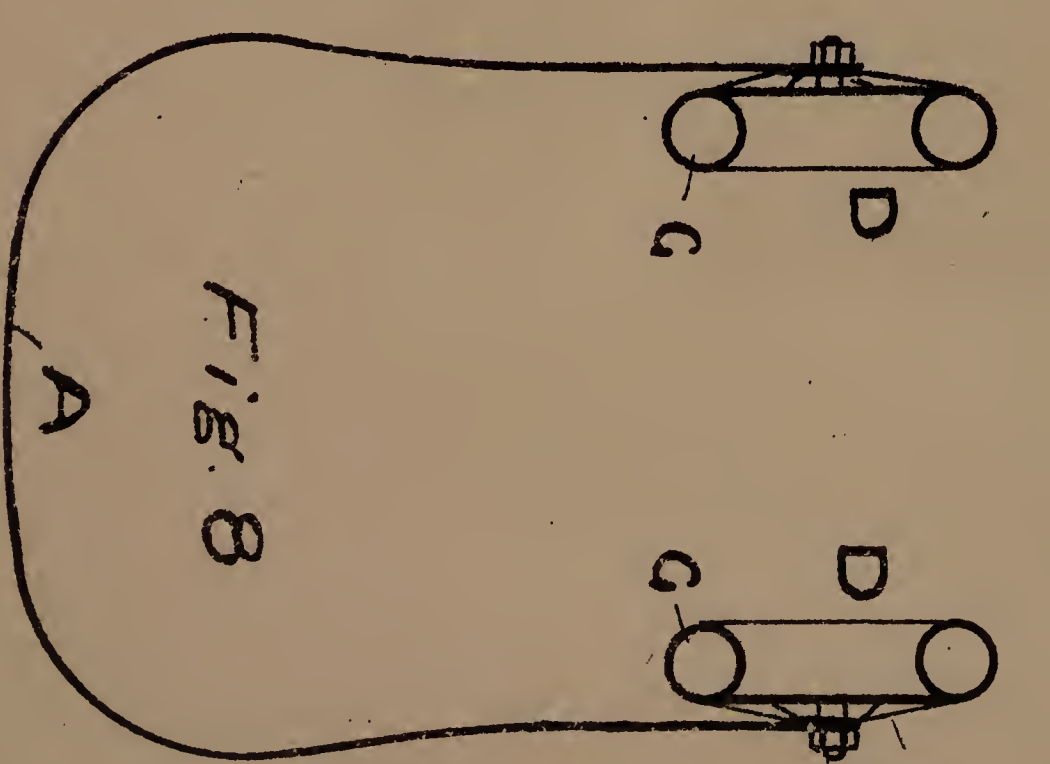


Fig. 8.

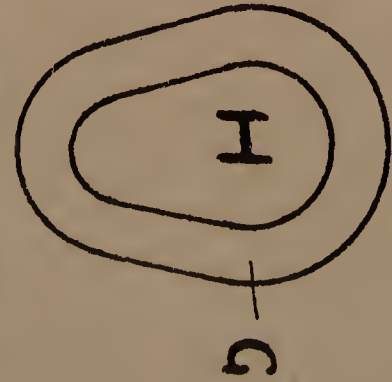


Fig. 9.

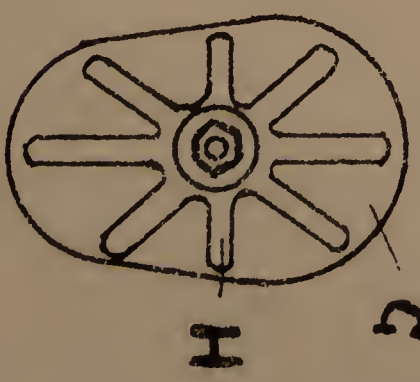


Fig. 10.

